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PROTEST

OF

C. BAILLAIRGE C.E.M.R.S.C.

QUEBEC

Against the finding of the Jury

IN THE POLLOK COMPETITION PRIZE OF \$20,000.00.

For the best safety raft in case
of accidents at sea.

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The finding of the Jury in the Pollok competition prize of \$20,000.00 for the best safety raft in case of accidents at sea

The Jury which at Havre, France, in September 1901, sat in judgment on the exhibits submitted—some 400 it is said—alluded in their report to my side raft as worthy of consideration ; but arrived at the conclusion that none of the exhibits made proof of an absolute guarantee of efficacy during a great storm or tempest.

I do not think Mr. Pollok could have meant the saving of passengers and crew during a storm when the waves sweep the deck and that no one can station there. In such a case every boat would be swept from the deck, and next day with the wind gone down and tempest over, there would then, even if required, be no possible means of salvation or escape in case of a wreck by a collision or otherwise ; since there would then be neither boats nor rafts available for the purpose ; while with the proposed system of side rafts which no storm could move or cause to budge from their moorings, the required apparatus would be there to do the needful.

The necessity for salvation at sea does not by any means present itself only during great storms. On the contrary vessels are wrecked 4 times out of five during calms, of a dark night or by mistaking one light for another, by collision with an iceberg, etc., and an abandonment of the vessel may even occur, as has already been the case, by the explosion of a boiler or break in the machinery when a "connecting rod" or other heavy piece of machinery is sent headlong through the vessel below its water line. My lateral or supporting galleries at some 3 feet above sea level or draft of vessel, would have the advantage of limiting the rolling tendency of the ship, in the same way that with a river steamer when one of the projecting wings reaches the water, this immediately reacts and limits the roll, a thing which would not occur if no gallery were there.

The rafts ranging end to end along the side or flank of the vessel oppose less resistance to a head wind which only strikes one of them, than the multiplicity of boats each of which in turn, as the wind passes the one in front of it, offers an additional resistance, which cannot occur with the side rafts ; while also the rafts can be so disposed longitudinally as to offer no obstacle to loading or unloading ports.

The rafts, for a vessel with two tiers of cabins are 12 feet in width or 12 feet high when up righted against flank of ship ; while those for vessels with three tiers of cabins are 20 feet and the total number required at 200 or 300 persons per raft respectively is even in vessels of the Oceanic type or of the Cettic type with their complements of from 2500 to over 3000 souls aboard, less than one third the length of vessel or such as never to infringe on the curved portions of the vessel to which they could not be adapted.

No objection can obtain in regard to light to cabin windows, the twelve feet rafts being pierced with one row, the 20 foot rafts with two rows of properly placed embrasures through and through the raft for the purpose.

The raft as described in detail in the authors' illustrated exhibit submitted to the adjudicating Jury in September 1901, is built of some such light wood as pine, crib-work fashion with intermediate cork filling for buoyancy.

The raft is in compartments formed by the longitudinal and cross walls required to stiffen it and render it resisting.

The bottom and sides of it are enveloped in a one eighth of an inch thick iron or steel sheeting the whole well fastened together.

With a cork bottom held in position by a light wooding flooring to render it unsinkable with its living freight ; its height inside is some $3\frac{1}{2}$ feet or such as there be no danger of any one toppling over its sides ; the occupants being also guaranteed against sprawling on its flooring during rough weather, by having always at hand or in their immediate vicinity a wall or partition to lean against and thus maintain their equilibrium.

The raft is in advance of its adjustment to the side of the vessel, supplied with masts, oars, spars, sails, rope, tools, fishing and fowling tackle, provisions say for a couple of weeks and including oil and oil stoves for culinary purposes.

Around its upper edge or gunwale are a series of holes into which to place as many iron standards with eyelets to string a rope through to which to fix a breadth of canvas to be looped or buttoned to sides of raft, to protect the passengers from wind and wave.

The raft is then placed in position, resting on its supporting gallery and tied to vessel by heavy iron armatures hinged below to outer edge of gallery and folding over it and the gunwale of the vessel where on the inner side of gunwale it is fastened by an iron pin to each of the iron straps and in such a way that any man, woman or adult child can in an instant, pull out the pin, throw over the strap which falling into the sea where it hangs vertically from outer edge of gallery as already said, it forms a guard against the danger of the raft becoming fouled or unmanageable by getting under edge of gallery ; absolutely as when about approaching a steamboat, guards or fenders are held out to prevent the boat from being caught underneath the projecting deck or wing of the river steamer.

In a word the proposed raft is incontestably the only system which can be considered sure, instantaneous and simultaneous to the extent of at once saving all hands on board.

The proposed system can in no way impede the vessel's motion, the supporting gallery being at such a height as to leave the cabin windows below it unobstructed, while at the proper height to step directly from it into the raft when afloat, holding on by one hand to an iron rail along the ship while, as in getting into a boat, watching the proper moment for so doing.

The additional cost can hardly exceed that of say 5 times the number of boats required with that of their suspending davits and tackle, while as to the additional weight it is less than one per cent of that of the vessel or say 10 tons for a 1000 tons vessel, 100 tons for a 10,000 tons vessel and from 200 to 300 tons for a 20,000 to 30,000 tons steamers.

With boats, as is well known, it is necessary for the crew to do the needful in getting them into the water, and it was seen in the case of the Bourgogne that the crew could not be relied on for the purpose ; self preservation being the order of the day.

With boats, ropes become old, rusty and rotten. One end of boat is lowered faster than the other and the inmates are toppled into the sea. This has been the experience in almost every case of shipwreck.

With the rafts proposed, there is no necessity of relying on the crew of the vessel to do the needful. The fastening pin is pulled out, the raft pushed or toppled over and held in position until filled, when the ropes are cut and the raft pushed out to sea, while the getting into it is accomplished in a few minutes by descending by ladders fixed to sides of vessel from deck to gallery level.

Let me say again that it is impossible to imagine a system which like that of the side raft will leave the deck of vessel absolutely unobstructed ; which shall be inexpensive and by which all can be saved, every one on board, while with such a vessel as the Celtic no room could ever be found on board for the 60 or more boats required to save a complement of over 3000 persons (passengers and crew) and never could any crew when a vessel were in danger of foundering, be controlled into doing the work of lowering so many boats to water level. I say that never could any captain under such cir-

cumstances succeed in getting 240 men—4 to each of the 60 boats, or even half that number—to obey his orders while self preservation was staring them in the face.

The passengers themselves would then have to do duty for the crew and not one out of ten of them could likely be found who would know how to go about it. This I repeat, this incapacity, this want of discipline on part of the crew, was the cause of the loss of life on the Bourgoigne.

I have myself crossed the ocean during a 14 days voyage in rough and stormy weather when ample time was afforded me for studying up the scheme which I now propose as the only absolutely reliable one.

With boats, let a storm occur at the commencement of the voyage, and the boats be washed overboard as is so often the case ; then what is to be done if from a collision or other cause the vessel has to be abandoned ? all must go down and perish. On the contrary, with the proposed rafts, as no tempest could budge them, due to their mode of fastening, passengers aboard, could bide their time, remain below until the storm were over and then on an accident occurring, the raft would be at hand to save the crew and passengers.

In conclusion I therefore most respectfully *protest* against the finding of the Jury that because in their opinion the system would or might not prove available during a great storm, the prize should not be awarded ; since the prize was not to be so awarded or only in such case ; but was proposed by M. Pollok for salvage “ in case of accidents at sea ” and as such accidents occur, as stated, four times out of five, when there is no great storm, the prize or a portion of it should have been awarded as in 1900 \$2000.00 were awarded to M. Roper for a deck raft which was declared to be “ something in the right ” while every engineer and sailor considers my side raft as “ something much more or nearer in the right direction ” that the Roper raft which could not be launched from such a height as 7 feet above deck level, without spilling out every one on board if loaded before launching, or of shipping so much water on being launched with even no one in it as to render it unfit to get into, when half full of water in advance of shipping it live freight, and again I insist that during a great storm with boats blown from their moorings on board, should such a storm occur at the beginning of the passage across the ocean, nothing would be left to save the passengers and crew if after the storm were over and the boats gone, a collision or other casualty occurred to render it necessary to leave the vessel.

If M. Pollok was sincere in this, his offer of a prize for saving life at sea, he cannot but arrive at the conclusion that the Jury have been wrong in their finding and that he should himself remedy the finding by awarding at least a portion of the prize.

CHS. BAILLAIRGE

Engineer, Arct., etc., etc.

Quebec, March, 1902.

P. S.—May be also that instead of so many “ retired captains ” on the Jury, some civil engineer would not have been *de trop* to enable the Jury to appreciate the beneficial effect of the side supporting galleries or wings of some 4 feet in width, in their effect of limiting or reducing the rolling of vessel : to calculate or see the great decrease in resistance of my rafts to a head wind as compared with that offered by a multiplicity of boats and finally to judge of the efficient and immovable manner in which my rafts are fastened to the vessel, so that no sea, the heaviest, could budge them and how easy and instantaneous to topple over into the water, get into and cut adrift of the suction of the downing vessel.

I therefore have the right, I submit, of asking that the Jury be again convened to do justice in the premises as was the case with the first finding in respect to the Santos-Dumont balloon or air ship when upon reconsideration the first and erroneous judgment was reversed and the prize awarded.

Humbly submitted,

C. B.

